Brown &Green Investment Behavior: An Empirical study of Awareness, Attitude & Performance

Synopsis of the Research Proposal

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By

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1. INTRODUCTION

Investment can be described as an item having the potential to generate return, which is acquired with the purpose of capital appreciation. Capital appreciation means increase in the value of the asset over time. Investments are usually undertaken to meet the future requirement of funds. From economics point of view, investment means any such item which will be consumed or used in future to generate wealth. In finance, an item having a potential to generate income or can be sold in future at a price higher than its cost can be termed as an investment. Brown investment refers to 'dirty' or 'polluting' finance. It simply means to invest in activities which are damaging our planet and adds to the challenges of climate change. An investment is considered brown when it pollutes the environment and operates in a way which is not conducive for the environment. An investment is considered 'green' when their issuers are committed towards protecting the environment, conserving the natural resources, being less reliant on usage of fossil fuels. It adopts sustainable practices and avoid activities that are detrimental for the health of the environment & society at large.

The objective of undertaking an investment differs from person to person. Some of the reasons why people generally invest are minimizing their tax liability, save for their retirement, capital appreciation, liquidity, safety of funds, meet their financial goals etc. An investor's investment behavior is reflected by their choices or selection of investment and there are various socioeconomic factors which impact the investment decision of an investor such as gender, age, income of an individual, marital status, occupation, spouse's education, family size, no of dependents etc. This research intends to study the attitude of the investors w.r.t their perception & actual financial decision making.

Climate change has become a global concern & has attracted mounting consensus from all over the planet (**Sasmita & Bimal, 2009**) In such a situation, the risk that cognate due to climate change becomes a material area of discussion and it is important to map out strategies at national level, framing sustainable business practices & overhauling of finance in developing economy like that of ours.

A recently held conference on climate change in Glasgow 2021 (Cop26), where the communities from all over the globe debated on the ways to manage climate change and ensuring that our practices are not detrimental to the environment and masses. India, at

CoP26, has warrant to become emission free by 2070. India is constantly hitting and making it mandatory for market players to adopt sustainable ways of doing business. One of the indicators of the same is the introduction of comprehensive sustainability and Environment, Social and Governance ("ESG") related disclosures to encourage companies to look beyond the quantitative factors

The compliance with ESG requirements or the sustainable business practices has become very crucial for all stakeholders. Investors are today using ESG analysis as a parameter to judge the quality of management of the company and its future prospects which helps them to design a profitable portfolio for themselves. ESG disclosures by a business thus play a pivotal role in identifying the impact of business activities and gauge the financial stability of the business. It also helps the companies to stand out and build goodwill for itself. ESG disclosures will open up opportunities for the companies, pave way for innovation and promoting its business objectives without compromising with the interest of its stakeholders at large. Businesses also use disclosure principle to pull customers by focusing on sustainable ways of doing their activities. (**Avinash Das, et.al, 2023)**

Green investment is a long term concept and thus fails to attract investors looking for short term gain. Difficulty in pooling capital for green investments, lack of awareness, lack of stable government policies are some reasons which act as barriers to green investment **(Thi Thanh Tu Tran, 2020)** Since the introduction of Nifty 100 ESG Index in 2011, it has outperformed its parent index with a return of 10.6% as compared to 9.1% of the traditional Nifty 100 Index. This proves a steady growing interest in ESG investing by Indian investors. This shift and growing interest towards conscious impact investing also implies that investors believe that their financial choices can make a difference & bring about a positive societal change. This aptitude or behavior of investors was witnessed during COVID-19 when the world was facing unparalleled shocks (**Haciomeroglu A.H, et.al, 2021**)

This study aims to find out the awareness among investors on brown & green investment & also study the impact of the same on their financial decision making. It also aims to find out whether the qualitative aspects affect the financial performance of the companies and whether the ESG screened companies generate more profit than the unscreened companies.

Evolution of ESG Disclosures in India

ESG reporting in India was introduced in 2009 with the Ministry of Corporate Affairs (MCA) issuing the Voluntary Guidelines on Corporate Social Responsibility. Ever since the reporting framework has come a long way with the introduction of Business Responsibility Reporting ("BRR"), Corporate Social Responsibility (CSR), National Guidelines on Responsible Business Conduct (NGRBC) and the newly introduced Business Responsibility and Sustainability Report (BRSR) (**Neetika Ahuja, et.al, 2023).**The ESG disclosure requirement was introduced by The Companies Act, 2013 for companies.

The Business Responsibility and Sustainability Reporting (BRSR) is a real conceptual structure for environmental, social and governance (ESG) reporting. BRSR framework has evolved from the Business Responsibility Report (BRR) of 2012 and came into effect in 2023, followed by the top 1000 publicly listed companies. It requires companies to provide quantitative metrics on factors related to sustainability as of fiscal year 2023—for eligible companies, April 2022 to March 2023. It also encourages listed companies to adopt healthy sustainable practices and disclose the same to its stakeholders. The BRSR framework is based on the principle of "comply or explain"

BRSR has reduced the complexities of reporting structure & provided a unified transparent method which companies are required to take up. India is not only one of the fastest growing economy but also has one of the largest emissions, thus making the sustainability reporting criteria even more important. The Securities and Exchange Board of India (SEBI) has introduced a set of 9 principles that aim to guide companies in adopting sustainable business practices and reporting them in a transparent and comprehensive manner.

India is observing a significant change in its reporting structure with emphasis towards sustainability reporting & promoting responsible practice catering to the developing and expanding requirement of compliance with ESG which has become the global spotlight today.

2. REVIEW OF LITERATURE

To address the challenges caused due to existing business practices, companies can adopt green investment and green finance practices to promote environmentally sustainable practices (Jianmu Ye, et.al.2023) This paper discussed about the Effect of Green Investment and Green Financing on Sustainable Business Performance of Foreign Chemical Industries Operating in Indonesia. It was also found that CSR significantly mediates green investment and green financing with sustainable business performance relationships. The scope of the study is limited to foreign chemical industries in Indonesia, and the findings cannot be generalized to other countries or industries. Esparcia C, et.al (2023) discussed about the importance of green awareness in energy investment decision making. It studies the financial performance of energy asset allocation strategies under green and brown preferences. The paper further contributes by providing sufficient evidences about the reduced carbon footprint due to green investment, and also mentions about the risk-return spread between green and brown energy investment, adding value for the environmentally concerned investor. Chengbo Fu, et.al, 2023 focuses on the relationship between green finance and sustainable development specifically focusing on combating climate change and achieving carbon neutrality. It also discussed about the role of substantial investments in green and low carbon initiatives to address climate change effectively and promote sustainable economic growth. It highlights the necessity of robust regulatory frameworks that facilitate the availability of green finance and the integration of carbon–neutral practices. Additionally, the paper explores the potential of impact investing, wherein investors accept lower financial returns in exchange for non-financial benefits in green finance. However, the study did not discuss anything about how to encourage investors for impact investing. Akhil Pasupuleti, et.al, 2023 studied about the phenomenon of green finance in polluting companies through a systematic literature review. The methodology involved analysis of around 35 articles of polluting companies for a period of about 11 years and review identified five themes involving (i) green credit and environmental protection; (ii) green finance and green innovation; (iii) green innovation and environmental protection; (iv) green finance and investment; and (v) green innovation and firm performance. The study was limited to only polluting companies & ignored the other industries. Leonidas Efthymiou, et.al, 2023 explores about the Sustainability and ESG in the Service Sector in India. The findings suggest that technology can both facilitate and hinder the sustainability effort; therefore, the implications on internal stakeholders, such as workers and managers, can be both positive and negative. It also states that adoption of an ESG framework has a largely positive impact on investors. While

companies do not place much emphasis on employees' wellbeing and 'human rights', they still link ESG to 'Supply Chain Sustainability. The survey was conducted in limited geographical area & was limited to only service sector. Sreenu Nenavath S, et.al 2023 studied about the impact of green finance and fintech on sustainable economic growth. The findings presented that green finance contributes to sustainable economic growth by an undoubtedly significant impact. However, fintech does not control the association between green finance and its economic effect. The study fails to determine the significance of numerous green financing strategies on ecological sustainability. Future studies mightalso consider how green financing affects corporate environmental behaviour. Maximilian Glück*, et.al (2022) studied about ESG ratings & stock market reactions, i.e the paper examines the effect of ESG rating on stock market return and found that investors frequently use ESG ratings as a part of their investment process to better evaluate a company's future prospects. The study did not examine whether the market reacts to the changes in score by other rating agencies. Mehwish, et.al 2022 studied about the ESG Factors and their Influence on the Investment Behavior of Individual Investor. The results obtained demonstrate that investors are sensitive to ESG factors. he respondents' investment decisions are significantly and dominantly influenced by the governance factors, followed by social factors, and then environmental factors have additional effects. The sample size was limited so the results cannot be generalized. The study was only limited to Pakistan. Mahesh K. M, et.al, 2022 studied about the Impact of Sustainable Finance on MSMEs and other Companies to Promote Green Growth and Sustainable Development. The purpose of this paper is to understand the concept of sustainable finance on MSME & the initiatives taken by government NABARD, SIDBI, RBI in sustainable finance. The study is based only on secondary data. Sensharma S, et.al, 2022 aims to look at ESG reporting in India through the lens of green-washing, with a focus on the companies listed in the National Stock Exchange under the NIFTY 50 index. The study also analyses and attempts to highlight the factors that influence a company's green-washing behaviour, focusing specifically on the Indian context.The study suggested approximately 54% of the companies showed green-washing behavior. The study considered a small sample size & was indicative not conclusive. Mukul Bhatnagar, et.al, 2022 aims to assess the present status of green finance in India and see its impact on startups. The study emphasized on the fact that in order to achieve net-zero emissions and other climate and environment-related objectives, considerable investments in decarbonization and innovation across all sectors of the economy will be necessary. The study just depicted the present status of green finance but did not provide any ways or techniques to improve this situation. It was based on secondary

data. Ranjan A, et.al(2021) studied about Green Finance in India, its Progress and Challenges. The results showcased that there has been improvement in the public awareness & financing options in India. However, the pandemic has also offered an opportunity to all stakeholders to rethink about the policies, and financial and operational strategies that they have adopted so far and espouse an approach that is more environmentally sustainable in the long run. Rout S, et.al 2021 studied about Green Finance: The Future of Sustainable Banking in India. The study analyzes various challenges of green finance in India & impact of green finance on sustainable banking in India. The study is based on secondary data. Haciomeroglu A.H, et.al 2021 studied about the analysis of Green versus Brown bonds during the COVID-19 pandemic. The study analyzes the performance of green bonds is affected by market conditions induced by pandemic. Results presented in this study show that both green and brown bonds of most issuers experienced a decline in their primary market yields following the start of the pandemic, however the decline in corporate green bonds was higher. Prajapati D, et.al 2021 studied about the preference of individual retail investors on green bond in India. The study was undertaken to understand the key drivers and the factors influencing the individual retail investor's decision to invest in green bonds. The study results suggest that the Environmental, Social, and Governance (ESG) rating and credit rating of the green bond issuers are the key factors that influence an individual's investment decision. The findings also highlight that incentives such as tax exemptions and awareness of green bonds also affect an investor's decision. The sample size was very small which failed to generalize the results. Satyabrata Aich, et. al 2021 studied about the Factors affecting ESG towards Impact on Investment. The study concludes that good governance, human rights, employee relationships, and corporate policy, lead to achieving investment impact through environmental impact. Ritika Seth, et.al 2021 attempts to study and critically evaluate ESG Investing and Sustainable Finance The intent of the study was to understand the concept, importance, scope, components, shortcomings and future of ESG Investing in India and how Environmental, Social and Governance concerns are affecting businesses and the financial market. Wellalage HN,et.al 2020studied about the effect of firm environmental efficiency on the firm financing during COVID outbreak. The research implies that the trust between the firm & its stakeholders pays off during shocks, if based on environmental performance. Thi Thanh Tu Tran, et.al 2020 studied about the factors affecting green investment for sustainable development. The factors in the survey includes Infrastructure for green investment, Difficulties in approaching funding for green investment activities, Incentives to access capital for green investment, Understanding of enterprises' green investment, Support

from the Government in accessing to fund for green investment, The capital that businesses can access for green investment, The enterprise plans to implement green investment projects actively and the special incentives of green investment. The research team here just focused on discovering the factors affecting green investment but not mentioning the impact of the green business investment on green development in Vietnam as well as not studying the macroeconomic factors that affect green investment. Dr. Swami Prasad Saxena, et.al2019aimed at analyzing the impact of ESG screening on financial performance of the companies. The results showed that there is no significant impact of ESG screening on financial performance and risk profile of the companies. Chaudhary R, et.al 2018 study about Factors influencing green purchase behavior of millennial's in India. The purpose of this paper is to understand the green buying behavior of educated millennial's in India. The variables considered here was environmental concern & willingness to pay premium. It was found environmental concern exert an indirect influence on green purchase intention. Uppu Padmavathi 2017studied about how green investment foster green economy. This paper discusses fundamental roles of corporate green investment activities on sustainable development and identifies how firm green investment practices contribute to economic sustainability, social sustainability and environmental sustainability in pursuit of generating a green economy. The study was based on only secondary data. Tripathi V, et.al 2013 attempts to study about green is good in Indian Stock Market. This paper examines whether green stocks portfolio outperforms non-green stocks portfolios and market portfolio in Indian stock market. It was found that that although green stocks portfolio generated significantly higher return than market portfolio, it did not outperform mimicking stocks portfolio or blue chip non green stocks portfolio.

RESEARCH GAP

The concept green investment & green finance is itself very new. Moreover, in the state of West Bengal not much study has been done in this area. Most of the previous studies have considered or studied about the sustainable development, effect of green finance on the performance of companies or green finance with reference to a particular sector or industry. But there has not been any study done on green investment behavior, knowledge & attitude of the investors. There is also not much literature about the investor’s attitude & perspective between brown & green investment and the factors that motivates Indian investors to spend money on green projects. The study also intends to find out whether there is a “green gap” or

“intention-behavior gap” in West Bengal. Green Gap means that the investors are aware about the concepts of sustainability but the same is not reflected in their investment decisions.

3. PRESENT STUDY

3.1 STATEMENT OF THE PROBLEM

Due to technological advancements, we are living in most advanced times. Unlike the primitive times, when innovations were not environmental conscious coal, fossil fuels were primary source of energy. It was later when scientists realized the harsh impact of using fossil fuels and the search for alternatives begun. The concept of sustainability, green investment, corporate social responsibility, impact investing however started becoming the material areas of discussion. Earth’s temperature is constantly increasing with 2022 recorded as the sixth-warmest year on record based on NOAA’s temperature data.

According to a report published by a group of environment experts from German-watch India is the fifth most vulnerable country to climate change, In the 2020 Climate Risk Index, India's range has worsened from 14th place in 2017 to 5th in 2018 on the global vulnerability scale (**Krishnendu Bandyopadhyay, 2019).**

India has also recorded the highest number of deaths due to climate change and the second highest monetary losses due to its impact in 2018. India's high rank is due to heavy rains, followed by heavy landslides (**Krishnendu Bandyopadhyay, 2019)**.

With a continuous increasing shift and need to respond towards environmental issues, all around the globe, it has become extremely imperative for finance sector to respond to these environmental threats. Sustainability today is no longer just expected to be present in the talks or discussion; it has to be a part of business strategy now. However, the ideology of giving back to the society plays a very important role in pulling off sustainability and adhering to ethical practices. A successful business strategy includes sustainable practices. Doing well and Doing good should be the motto. Therefore, this study seeks to determine the awareness among the investors about brown & green investment & also study the attitude of the investors w.r.t their investment decisions.

3.2 SCOPE OF THE STUDY

Keeping aside the social good that will follow by adopting & transiting to sustainable practices. Sustainable Development Goals (SDGs) also know as Global Goals were adopted by United Nations in 2015 with an aim to transform and protect the planet along with other

objectives. Government is constantly striving and making it mandatory for market players to adopt sustainable ways of operating. Here financial sector plays a predominant role in boosting environmental sustainability. Thus it is important to know whether investors are aware about green investment or not. The study also aims to find out whether sustainable practices of the business help in improving its financial performance.

3.3 RESEARCH OBJECTIVES

1. To find out whether there is awareness among the investors on brown and green investment and also study the impact of the same on their investment decisions.
2. To study about the attitude of the investors w.r.t their perception & actual decision making
3. To find out whether there is any impact of ESG screening on the performance of the companies.
4. Determine whether there is a “green gap” or “intention-behavior gap” in West Bengal & is there any association between financial literacy, age, income & green gap.

3.4 HYPOTHESIS

H01 Investors are not aware about green investment & it has no significant impact on their decision making

H11 Investors are aware about green investment & it has significant impact on their decision making

H02 Investors attitude does not affect the perception & actual decision making

H12 Investors attitude affect the perception & actual decision making

H03 There is no significant impact of ESG screening on financial performance of the companies

H13 There is significant impact of ESG screening on financial performance of the companies

H04 There exists no green gap in India between investors

HI4 There exist green gap in India between investors

4. RESEARCH METHODOLOGY

In simple terms research methodology consist of all the methods & techniques used by the researcher to conduct the research. It is a systematic method for solving a problem. The

purpose of this study is to find out the awareness about brown & green investment & study the impact of the same on investor's decision making. It also aims to study the attitude of the investors and find out whether there exists a green gap in India or not.

4.1 Research Design

Research design is a conceptual structure with in which research is conducted; it constitutes the blue print for collection, measurement and analysis of data. The entire study will be done through both quantitative & qualitative approach.

Exploratory research design will be used as it will help us to collect more information about investor's attitude & perception towards brown & green investment.

4.2 Methods &Tools of Data Collection

Primary data will be collected through structure questionnaire consisting of close ended questions.

Secondary Data will be collected from Published journals, literature and reference books, newspapers, magazines as well as reports published in IAMA, ASSOCHAM etc.

4.3 Research Tool Design

I) ***Questionnaire Design*** The questionnaire is designed in a manner grouping questions in accordance with the objectives of research.

II) Sampling Plan

i. ***Sample Population***: Data will be collected from professionals, educationist, bankers, businessmen etc.

ii. ***Sample Size***: More than 350 samples will be collected. However, it can be further increased depending on the review of literature.

iii. ***Sample Location:*** The samples will be collected from the 3 states of West Bengal namely - Siliguri, Durgapur & Kolkata.

iv. ***Sampling Technique:*** Purposive Random sampling technique will be used for collection of data collection. Two stage sampling technique will be used for the purpose of this study, where the population will be divide into strata (professionals, educationist, bankers, businessmen etc.) and then responses will be collected from the above mentioned strata.

4.4 Data Analysis: Statistical Methods & Tools

SPSS Software will be used to perform the test. Test like Chi-square, Factor Analysis, t-test etc will be used.

5. LIMITATIONS OF THE STUDY

The study will be conducted only in the state of West Bengal. People from different cities may have different opinions and investment preferences.

The study is undertaken from the perspective of individual investor. Further studies can be done by taking institutional investors.

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